What is claimed is:

1. A method of providing improved real time kinematics determination, comprising the steps of:

determining a first position estimate using a received signal and an other received signal;

enhancing ambiguity resolution of the first position estimate by decorrelating a first and second measurement based on the received signal and the other received signal, respectively; and

deriving a second position estimate based on the enhanced ambiguity resolution.

2. The method as claimed in claim 1, wherein the received signals are GPS signals.

3. The method as claimed in claim 1, wherein the received signals are signals received by a GPS receiver.

4. The method as claimed in claim 1, wherein the first and second measurements are decorrelated using the function:

$$\tilde{V}_2 = \tilde{H}_2 X + \tilde{L}_2$$

5. The method as claimed in claim 4, wherein $\tilde{L}_2 = L_2 - \alpha L_1$, $\tilde{H}_2 = H_2 - \alpha H_1$, and

$$\tilde{D}_2 = (R_{L2}^2 + \alpha^2 R_{L1}^2 - 2\alpha R_{L1,L2}) \begin{bmatrix} W_1 + W_{ref} & W_{ref} & \cdots & W_{ref} & W_{ref} \\ W_{ref} & W_2 & \cdots & W_{ref} & W_{ref} \\ \vdots & \vdots & \ddots & \vdots & \vdots \\ W_{ref} & W_{ref} & \cdots & W_{n-2} + W_{ref} & W_{ref} \\ W_{ref} & W_{ref} & \cdots & W_{ref} & W_{n-1} + W_{ref} \end{bmatrix}$$

6. The method as claimed in claim 1, wherein the first and second measurements are decorrelated using a coefficient determined by the function:

$$\alpha = \begin{cases} 1 \\ \lambda_1/\lambda_2 \\ \lambda_2/\lambda_1 \\ 0 \\ R_{L1,L2}/R_{L1}^2 \end{cases}$$

7. The method as claimed in claim 1, wherein at least one of a ratio smoothing function and an ambiguity stability function are used if a baseline is 10 kilometers or greater.

8. The method as claimed in claim 7, wherein the ratio smoothing function is:

$\widetilde{\text{Ratio}} = \text{Ratio} + \widetilde{\text{Ratio}} * (\text{N} - 1)/\text{N}$ where N is the width of the moving window.

9. The method as claimed in claim 7, wherein the ambiguity stability function includes the steps of:

incrementing a counter for each epoch in which double differenced ambiguities remain the same; and

if the double differenced ambiguities are not zero and less than 50 epochs are counted, resetting the counter.

10. A computer readable medium comprising:

at least one sequence of machine executable instructions in machine form, wherein execution of the instructions by a processor cause the processor to:

determine a first position estimate using a received signal and an other received signal;

enhance ambiguity resolution of the first position estimate by decorrelating a first and second measurement based on the received signal and the other received signal, respectively; and

derive a second position estimate based on the enhanced ambiguity resolution.

11. The medium as claimed in claim 10, wherein the received signals are GPS signals.

12. The medium as claimed in claim 10, wherein the received signals are received by a GPS receiver.

13. The medium as claimed in claim 10, wherein the first and second measurements are decorrelated using the function:

$$\widetilde{V}_2 = \widetilde{H}_2 X + \widetilde{L}_2$$

14. The medium as claimed in claim 13, wherein $\widetilde{L}_2 = L_2 - \alpha L_1$, $\widetilde{H}_2 = H_2 - \alpha H_1$, and

$$\widetilde{D}_2 = (R_{L2}^2 + \alpha^2 R_{L1}^2 - 2\alpha R_{L1,L2}) \begin{bmatrix} W_1 + W_{ref} & W_{ref} & \cdots & W_{ref} & W_{ref} \\ W_{ref} & W_2 & \cdots & W_{ref} & W_{ref} \\ \vdots & \vdots & \ddots & \vdots & \vdots \\ W_{ref} & W_{ref} & \cdots & W_{n-2} + W_{ref} & W_{ref} \\ W_{ref} & W_{ref} & \cdots & W_{ref} & W_{n-1} + W_{ref} \end{bmatrix}$$

15. The medium as claimed in claim 9, wherein the first and second measurements are decorrelated using a coefficient determined by the function:

$$\alpha = \begin{cases} 1 \\ \lambda_1/\lambda_2 \\ \lambda_2/\lambda_1 \\ 0 \\ R_{L1,L2}/R_{L1}^2 \end{cases}$$

16. The method as claimed in claim 9, wherein at least one of a ratio smoothing function and an ambiguity stability function are used if a baseline is 10 kilometers or greater.

17. The method as claimed in claim 16, wherein the ratio smoothing function is:

$\widetilde{\text{Ratio}} = \text{Ratio} + \widetilde{\text{Ratio}} * (N-1)/N$ where N is the width of the moving window.

18. The method as claimed in claim 16, wherein the ambiguity stability function includes additional instructions which, when executed by the processor, cause the processor to:

increment a counter for each epoch in which double differenced ambiguities remain the same; and

if the double differenced ambiguities are not zero and less than 50 epochs are counted, reset the counter.

19. An apparatus for providing improved, real time kinematics determination, the apparatus comprising:

determining means for determining a first position estimate using a received signal and an other received signal;

enhancing means for enhancing ambiguity resolution of the first position estimate by decorrelating a first and second measurement based on the received signal and the other received signal, respectively; and

deriving means for deriving a second position estimate based on the enhanced ambiguity resolution.

20. The apparatus as claimed in claim 19, wherein the received signals are GPS signals.

21. The apparatus as claimed in claim 19, wherein the received signals are received by a GPS receiver.

22. The apparatus as claimed in claim 19, wherein the first and second measurements are decorrelated using the function:

$\widetilde{V}_2 = \widetilde{H}_2 X + \widetilde{L}_2$

23. The apparatus as claimed in claim 22, wherein $\widetilde{L}_2 = L_2 - \alpha L_1$, $\widetilde{H}_2 = H_2 - \alpha H_1$, and

$$\widetilde{D}_2 = (R_{L2}^2 + \alpha^2 R_{L1}^2 - 2\alpha R_{L1,L2}) \begin{bmatrix} W_1 + W_{ref} & W_{ref} & \cdots & W_{ref} & W_{ref} \\ W_{ref} & W_2 & \cdots & W_{ref} & W_{ref} \\ \vdots & \vdots & \ddots & \vdots & \vdots \\ W_{ref} & W_{ref} & \cdots & W_{n-2} + W_{ref} & W_{ref} \\ W_{ref} & W_{ref} & \cdots & W_{ref} & W_{n-1} + W_{ref} \end{bmatrix}$$

24. The apparatus as claimed in claim 19, wherein the first and second measurements are decorrelated using a coefficient determined by the function:

$$\alpha = \begin{cases} 1 \\ \lambda_1/\lambda_2 \\ \lambda_2/\lambda_1 \\ 0 \\ R_{L1,L2}/R_{L1}^2 \end{cases}$$

25. The apparatus as claimed in claim 19, wherein at least one of a ratio smoothing function and an ambiguity stability function are used if a baseline is 10 kilometers or greater.

26. The apparatus as claimed in claim 25, wherein the ratio smoothing function is:

$\widetilde{\text{Ratio}} = \text{Ratio} + \widetilde{\text{Ratio}} * (N-1)/N$ where N is the width of the moving window.

27. The apparatus as claimed in claim 25, wherein the ambiguity stability function further includes:

incrementing means for incrementing a counter for each epoch in which double differenced ambiguities remain the same; and

resetting means for resetting the counter if the double differenced ambiguities are not zero and less than 50 epochs are counted.